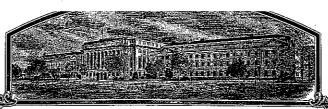
No.



9800163

THIE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE: PRESENTS SHALL COME:

A&PL Technology Holding Corp.

MICCONS, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS BROM SELLING THE VARIETY, OR OFFERING IT FOR SAIE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR RENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'DP 5989'

In Testimone Therest, I have hereunto set my hand and caused the seal of the Mant Antiety Protection Office to be affixed at the City of Washington, D.C. this eighteenth day of Tebruary, in the year two thousand and four.

Attast:

Gemjac

Commissioner Plant Variety Protection Office Agricultural Marketing Service of Agriculture

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE

SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

The following statements are made in accordance with the Privacy Act of 1974 (5U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

| | nation collection burden stat | tement on reverse) | | <u> </u> | 2. TEMPORARY D | ESIGNATION OF | la 1// | ARIETY NAME |
|--|-------------------------------|-------------------------------------|--------------|------------------|---|--------------------|----------------------|--|
| 1. NAME OF OWNER | | | | | EXPERIMENTA | L NAME | 3. 4 | ARIELLINAME |
| D&PL Technology | y Holding Corp. | | | | l | 3-14731 PX 8S59 | | DP 5989 |
| 4. ADDRESS (Street and No., or R.F.D. | No., City, State, and ZIP C | ode, and Country) | | | 5. TELEPHONE (in | clude area code) | | |
| PO Box 157 | | | | | (662 | 2) 742-4141 | M | 0 9 8 0 0 1 6 |
| 100 Main Street Scott, Mississippi 38 | 772 | | | | 6. FAX (include are | a code) | | 9800163 |
| USA | | | | | (66) | 2) 742-3182 | FILIN | G DATE |
| | | | | | • | | | |
| 7. IF THE OWNER IS NOT A "PERSON ORGANIZATION (corporation, partner) | | 8. IF INCORPORATE STATE OF INCOR | | I | 9. DATE OF INCOI | RPORATION | 1 | 6 March, 1998 |
| Corporation | | Delaware | | | | iary 29, 1996 | | LING AND EVANDALATION |
| 10. NAME AND ADDRESS OF OWNER Delta and Pine Land C Kelly Casavechia P.O. Box 157 Scott, MS 38772 | | O SERVE IN THIS APF | PLICATION. | (First person | isted will receive all | papers) | \$ D. C. S. D. D. | LING AND EXAMINATION EE: 2,450.00 ATE March 16, 1998 ERTIFICATION FEE: 432 00 ATE 216/2004 |
| 11. TELEPHONE (include area code) | 12. FAX (include area cod | e) | 13, E_M. | AIL | | | 14. CROP KIND | (Common Name) |
| | | | | | | | | Cauhaan |
| (662) 742-4141 15. GENUS AND SPECIES NAME OF C | (662) 74 CROP | 2-3182 16. FAMILY | | • | chia@deltaand | pine.com | 17. IS THE VARIE | Soybean ETY A FIRST GENERATION |
| | | | | | | | HYBRID? | |
| Glycine | <u>Max</u> | | Legum | inosae | | | □YE | ES XNO |
| 18. CHECK APPROPRIATE BOX FOR E reverse). | EACH ATTACHMENT SUB | MITTED (Follow instru | ctions on | | HE OWNER SPECIF ED SEED? (See Se | | | BE SOLD AS A CLASS OF ection Act) |
| a. X Exhibit A. Origin and Breedin b. X Exhibit B. Statement of Distin c. X Exhibit C. Objective Descript | octness | | | | YES (If "yes", answe | | _ | f "no", go to item 22) |
| d. Exhibit D. Additional Descrip | tion of the Variety (Optional | • | | | | THAT SEED OF 1 | HIS VARIETY BE L | IMITED AS TO NUMBER |
| e. x Exhibit E. Statement of the Bring of th | | • | es, | OF GENI | ERATIONS? | | | |
| verification that tissue culture | | | | | YES | 10110000000 | NO | VAND DDEEDED OF DA |
| repository) g. X Filing and Examination Fee (\$ | \$2,450), made payable to "7 | Freasurer of the United | | 21. IF "YES" | TO ITEM 20, WHICH | H CLASSES OF | PRODUCTION BE | YOND BREEDER SEED? |
| States" (Mail to the Plant Vari | ety Protection Office) | | | , | FOUNDATION | REGISTE | | CERTIFIED |
| 22. HAS THE VARIETY (INCLUDING AN FROM THIS VARIETY BEEN SOLD OTHER COUNTRIES? | | • | | E | ARIETY OR ANY COM TY RIGHT (PLANT BE | | | CTED BY INTELLECTUAL |
| | NO - As of date of origina | | | . – | YES | XNO | | D ACCIONED |
| IF YES, YOU MUST PROVIDE THE FOR EACH COUNTRY AND THE C | | | | | SIVE COUNTRY, DA :NCE NUMBER. (PI | | | |
| 24. The owners declare that a viable sam for a tuber propagated variety a tissu | | | | | | | nce with such regu | lations as may be applicable, or |
| The undersigned owner(s) is(are) the and is entitled to protection under the | e owner of this sexually rep | roduced or tuber propa | agated plant | | | | nct, uniform, and st | table as required in Section 42, |
| Owner(s) is(are) informed that false | representation herein can j | eopardize protection ar | | | | | | |
| SIGNATURE OF OWNER | This. | | SIGNATU | JRE OF OWN | ≅R | | | |
| NAME (Please print or type) | - Jul | | NAME (P | lease print or t | ype) | · | | |
| William V. Hugie | | | | | | | | |
| CAPACITY OR TITLE | DATE | 1.1 | CAPACIT | Y OR TITLE | | | ., | DATE |
| Vice President/Director of Rese | aarch 101 | 14/02 | | | | | | |

EXHIBIT A

DGPL Technology Holding Corp's

DELTAPINE SEED'S APPLICATION FOR-DPX 8S59>
(BT:12/4/02)

£31008E.

ORIGIN AND BREEDING HISTORY

| Summer | 1991 | Cross 91-654 made between FFR 561 and DP 3589 |
|--------|----------|--|
| Winter | 1991-92 | F ₁ advanced to F ₂ under lights in Costa Rica |
| Summer | | |
| Fall | 1992 | F ₂ advanced to F ₄ by modified single seed descent in Costa |
| | | Rica |
| Spring | 1993 | F ₄ plants grown from cross 91-654 and threshed separately |
| Summer | 1993 | F ₅ plants were planted at Scott, MS. Row 93-14731 was composited and determined to be breeding true for the regular regular. |
| | | composited and determined to be breeding true for the 1/1/2003 per applicant's |
| | | |
| | | no known variants observed at this time. (bt:per applicant's authorization on Line 93-14731 was yield tested at one location |
| | 1994 | Line 93-14731 was yield tested at one location |
| | 1995-97 | Line 93-14731 was yield tested at 33 locations over three years. |
| • | | Breeder seed increased to 220 units of Foundation Seed. |
| | 1998 | Designated and tested as DPX 8S59 in State Experiment |
| | | Station trials. Seed will be increased further and released for |
| | | sale in 1999. Variety name = 'DP 5989' (BT: 12/4/82) |
| | V-1 0-1- | is I waste it it and the witness wood and development and |

Note: According to applicant the selection criteria, used in development and testing of this variety was yield and overall plant performance and discose resistance to g. sten canker, frogeye leaf spot, etc.) reaction (per applicants authorization given per telephone conversation on 12/4/2003-bt).

EXHIBIT B

D&PL Technology Holding Ospis

DELTAPINE SEED'S APPLICATION FOR DPX 8859

NOVELTY STATEMENT

To our knowledge DPX 8S59 most resembles DP 3588 and DP 3589. Differences include but are not restricted to the following:

'DP 5989'

(87:12/4/02) 1) 4DPX 8S59 has white flowers whereas DP 3588 and DP 3589 have purple flowers.

PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MARYLAND 20105

OBJECTIVE DESCRIPTION OF VARIETY SOYBEAN (Glycine max LJ

| PERFORMANY DESIGNATION PARTY NAME POLITAGINE Seed Deltapine Seed DPS 8559 DPS 8559 DPS 8559 PROFICIAL USE ONLY FOR OFFICIAL TOTAL FOR OFFICIAL FOR OFFICIAL USE ONLY FOR OFFICIAL USE ONLY FOR OFFICIAL USE ONLY FOR OFFICIAL TOTAL FOR OFFICIAL USE ONLY FOR OFFICIAL TOTAL FOR OFFICIAL FOR OFFICIAL TOTAL FOR OFFICIAL FOR OFFICIAL TOTAL FOR OFFICIAL FOR OFFICIAL | | | · · | • |
|---|--|---------------------------------|--|--|
| ADDRESS SERVENT AND A. OF R.T.O. No., City, Soirc, and Zip Code! DPX 8859 DPS 8859 DPS 8859 DPS 8859 DPS 8859 POR OFFICIAL LUSE CONLY FOR DIMENSE. FOR OFFICIAL LUST CONLY FOR DIMENSE. SEED COAT CUSTER: (Mature Seed) 1 - Publi (Corroy 79': Brantor!) 2 - Shiny (Nebbory': "Geory 17'] SEED SIZE: (Mature Seed) 1 - Yellow 2 - Green 3 - Brown 4 - Gray 5 - Imporfect Black 6 - Black 7 - Other (Specify) 1 - Yellow 2 - Green 3 - Brown 4 - Gray 5 - Imporfect Black 6 - Black 7 - Other (Specify) 1 - Yellow 2 - Green 3 - Brown 4 - Gray 5 - Imporfect Black 6 - Black 7 - Other (Specify) 1 - Yellow 2 - Green 1 - Yellow 2 - Green 3 - Brown 4 - Gray 5 - Imporfect Black 6 - Black 7 - Other (Specify) 1 - Yellow 2 - Green 3 - Brown 4 - Gray 5 - Imporfect Black 6 - Black 7 - Other (Specify) 1 - Yellow 2 - Green 3 - Brown 4 - Gray 5 - Imporfect Black 6 - Black 7 - Other (Specify) 2 - Type 8 (Sp1 th) SEED FROTEIN ELECTROPHORETIC BAND: 1 - Type A (Sp1 th) 1 - Type A (Sp1 th) 2 - Type 8 (Sp1 th) 3 - Upit further below convictions (Paccount; Telector 27:1) 4 - Black brupte extending to unitolisite leaves ('Hodgron': Coker Hampton 266A') | NAME OF APPLICANTISI | | GNATION VARIETY NAME | |
| ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) FOR OPPICIAL USE ONLY. 9800163 Chooise the appropriate response which characterizes the variety in the features described below. When the member of in your answer is fewer than the anumber of boxes provided, place a zero in the first box when number is 9 or less tegs. 10 Chooise the appropriate response which characterizes the variety in the features described below. When the member of in your answer is fewer than the anumber of boxes provided, place a zero in the first box when number is 9 or less tegs. 10 Chooise the appropriate response which characterizes the variety in the features described below. When the unber of inhibition in your answer is fewer than the anumber of inhibition. SEED STATE (IN INTEREST CONTROLL) 1 - Special (LIW, LIT, and TIW ration - < 1.2) 1 - Yellow 2 - Green 3 - Brown 4 - Black 5 - Other (Specify) 2 - Shiny (Nebsoy': Garoy 177) SEED COAT LUSTER: (Mature Seed) 1 - Yellow 2 - Yellow 3 - Brown 4 - Gray 5 - Imporfeet Black 6 - Black 7 - Other (Specify) 1 - Yellow 2 - Green SEED FROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED FROTEIN ELECTROPHORETIC BAND: 1 - Type 8 (SP1b) 1 - Type A (SP1*) 2 - Type 8 (SP1b) NYPOCOTYL COLOR: 2 - Type 8 (SP1b) 1 - Ork Purple extending to unitoliste leaves ('Hodgron': 'Coker Hampton 2664') | Deltapine Seed | | 74 50 00 | |
| Choose the appropriate response which characterizes the variety in the features described below. When the number of signification your answers is fower than the anumber of boxes provided; place a zero in the first box when number is 9 or less (e.g., | | DPX 8S59 | DP 3989 | (87:12/4/2002) |
| Choose the appropriate response which characterizes the variety in the features described below. When the number of algorithm is your answer. It fewer than the anumber of boxes provided, place a sero in the first box when number is 9 or lear (e.g., 12) | | L(β Code) | FOR OFFIC | AAL USE ONLY |
| Starred characters & are considered fundamental to an adequate toybean variety description. Other characters should be description in available. 1. SEED SHAPE: | | | 980 | |
| 1 - Spherical (L/W, L/T, and T/W sation = < 1.2) 2 - Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2) 3 - Broopes (L/T ratio > 1.2; T/W > 1.2) 4 - Blongste Flattened (L/M ratio > 1.2; T/W > 1.2) | Starred characters * are considered fundamental to an when information is available. | vided; place a zero in the t | | and the same of the same |
| 3 - Bongste (LT ratio) 1.2: T/M - < 1.2! 4 - Elongste Flattened (LT ratio) 1.2: T/M 1.2! L SEED COAT COLOR: (Mature Seed) 1 1 - Yellow 2 - Green 3 - Brown 4 - Black 5 - Other (Speedly) SEED COAT-LUSTER: (Mature Hand Shelled Seed) 2 1 - Outl ("Corroy 79": "Braxton") 2 - Shiny ("Nebsory": "Gasoy 177] SEED SIZE: (Mature Seed) 7 Grams per 100 seeds HILLUM COLOR: (Mature Seed) 6 1 - Buff 2 - Yellow 3 - Brown 4 - Gray 5 - Imperfect Black 6 - Black 7 - Other (Speedly) COTYLEDON COLOR: (Mature Seed) 1 1 - Yellow 2 - Green SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (Sp1*) 2 - Type 8 (Sp1*) HYPOCOTYL COLOR: 2 1 - Green only ("Evans": "Davis") 2 - Green with bronze band below cotyledons ("Woodworth": Tracy") 3 - Light Pumple below cotyledons ("Biceson": Tickert 71") 4 - Dark Pumple extending to unifoliate leavet ("Hoodgoon": "Coker Hampton 265A") | 2 (L) | | | |
| 1 - Yellow 2 - Green 3 - Brown 4 - Black 6 - Other (Specify) SEED COAT-LUSTER: (Mature Hand Shelled Seed) 2 1 - Dutl ("Corxoy 79"; "Braxton") 2 - Shiny (Nebsoy"; "Gatoy 177] SEED SIZE: (Mature Seed) 7 Grams per 100 seeds HILLUM COLOR: (Mature Seed) 6 1 - Buff 2 - Yellow 3 - Brown 4 - Gray 5 - Imperfect Black 6 - Black 7"-Other (Specify) COTYLEDON COLOR: (Mature Seed) 1 1 - Yellow 2 - Green SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SP1*) 2 - Type B (SP1*) HYPOCOTYL COLOR: 2 1 - Green only ("Evant"; "Davis") 2 - Green with bronze band below coryledons ("Woodworth"; "Tracy") 3 - Light Pumple below coryledons ("Beeson"; Tickert 71") 4 - Dark Pumple extending to unifoliate leaver ("Hodgson"; "Coker Hampton 266A") | 1 = Spherical (L/W, L/T, and T/W ratios = < 1.2) 3 = Elongate (L/T ratio > 1.2; T/W = < 1.2) | 2 = Spherical 4 = Elongate f | Flattened (L/W ratio > 1.2: L/T ratio Flattened (L/T ratio > 1.2: T/W > | o-< 1.2) 1.2) |
| SEED COAT-LUSTER: (Mature Hand Shelled Seed) 2 1 - Duft ('Corsoy 79'; 'Braxton') 2 - Shiny ('Nebsoy'; 'Gasoy 177) SEED SIZE: (Mature Seed) 7 Grams per 100 seeds HILUM COLOR: (Mature Seed) 6 1 - Buff 2 - Yellow 3 - Brown 4 - Gray 5 - Imperfect Black 6 - Black 7'-Other (Speed) COTYLEDON COLOR: (Mature Seed) 1 1 - Yellow 2 - Green SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SPI*) 2 - Type B (SPI*) INYPOCOTYL COLOR: 2 1 - Green only ('Evant'; 'Davis') 2 - Green with bronze band below cotyledons ('Woodworth': 'Tracy') 3 - Light Purple below cotyledons ('Beeson'; 'Tickett 71') 4 - Oark Purple extending to unifoliate leavet ('Hodgion'; 'Coker Hampton 266A') | . SEED COAT COLOR: (Mature Seed) | | | <u> </u> |
| 2 1 - Dutil (*Corroy 79'; *Braxton') 2 - Shiny (*Nebroy'; *Gazoy 17') SEED SIZE: (Mature Seed) 7 Grams per 100 seeds HILUM COLOR: (Mature Seed) 6 1 - Buff 2 - Yellow 3 - Brown 4 - Gray 5 - Imperfect Black 6 - Black 7 - Other (Specify COTYLEDON COLOR: (Mature Seed) 1 1 - Yellow 2 - Green SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (Sp1*) 2 - Type B (Sp1*) HYPOCOTYL COLOR: 2 1 - Green only (*Evans'; *Davis') 2 - Green with bronze band below conyledons (*Woodworth'; *Tracy') 3 - Light Purple below conyledons (*Becson'; *Pickett 71') 4 - Dark Purple extending to unitoliate leaves (*Hodgson'; *Coker Hampton 266A') | 1 1 - Yellow 2 - Green 3 - Brown | 4 = Black E | i - Other (Specify) | |
| SEED SIZÉ: (Mature Seed) 7 Grams per 100 seeds HILLIM COLOR: (Mature Seed) 6 1 - Buff 2 - Yellow 3 - Brown 4 - Gray 5 - Imperfect Black 6 - Black 7 - Other (Specify COTYLEDON COLOR: (Mature Seed) 1 1 - Yellow 2 - Green SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SPI*) 2 - Type B (SPI*) HYPOCOTYL COLOR: 2 1 - Green only ("Evans"; "Davis") 2 - Green with bronze band below cotyledons ("Woodworth"; "Tracy") 3 - Light Purple below cotyledons ("Beeson"; "Dickett 71") 4 - Dark Purple extending to unifoliate leaves ("Hodgson"; "Coker Hampton 266A") | SEED COAT-LUSTER: (Mature Hand Shelled Seed) | | | |
| FILLUM COLOR: (Mature Seed) 6 | 2 1 - Dull ("Corsoy 79"; "Braxton") 2 - Shiny (" | Nebsoy; Gesoy 177 | • | : |
| HILUM COLOR: (Mature Seed) 6 1 - Buff 2 - Yellow 3 - Brown 4 - Gray 5 - Imperfect Black 6 - Black 7 - Other (Specify COTYLEDON COLOR: (Mature Seed) 1 1 - Yellow 2 - Green SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SPI ²) 2 - Type 8 (SPI ^b) HYPOCOTYL COLOR: 2 1 - Green only ("Evant": 'Davis") 2 - Green with bronze band below cotyledons ("Woodworth": 'Tracy") 3 - Light Purple below cotyledons ("Beeson": Trickett 71") 4 - Dark Purple extending to unifoliate leaver ("Hodgson": 'Coker Hampton 266A") | SEED SIZE: (Mature Seed) | | | |
| 6 1 - Buff 2 - Yellow 3 - Brown 4 - Gray 5 - Imperfect Black 6 - Black 7 - Other (Specify COTYLEDON/COLOR: (Mature Seed) 1 1 - Yellow 2 - Green SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SP1*) 2 - Type B (SP1*) HYPOCOTYL COLOR: 2 1 - Green only ("Evans": 'Davis") 2 - Green with bronze band below cotyledons (Woodworth": 'Tracy") 3 - Light Purple below cotyledons ("Beeson": Tickett 71") 4 - Dark Purple extending to unitoliate leaves ("Hodgson": 'Coker Hampton 266A") | 7 Grams per 100 seeds | | | ************************************** |
| COTYLEDON COLOR: (Mature Seed) 1 1 - Yellow 2 - Green SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SP1*) 2 - Type B (SP1*) HYPOCOTYL COLOR: 2 - Green with bronze band below cotyledors ("Woodworth": "Tracy") 3 - Light Purple below cotyledons ("Beeson": "Pickett 71") 4 - Dark Purple extending to unifoliate leaves ("Hodgson": "Coker Hampton 266A") | HILUM COLOR: (Mature Seed) | | | |
| 1 - Yellow 2 - Green SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SP1 ²): 2 - Type B (SP1 ^b) HYPOCOTYL COLOR: 2 - Green with bronze band below cotyledons ("Woodworth": 'Tracy") 3 - Light Purple below cotyledons ("Beeson": Pickett 71") 4 - Dark Purple extending to unifoliate leaves ("Hodgson": 'Coker Hampton 266A") | 6 1 - Buff 2 - Yellow 3 - Brown | 4 = Gray 5 = Impe | rfect Black 6+ Black 7 | =.Other.(Specify) |
| SEED PROTEIN PEROXIDASE ACTIVITY: 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SP1 ²] 2 - Type B (SP1 ^b] SYPOCOTYL COLOR: 2 1 - Green only ("Evans"; "Davis") 2 - Green with bronze band below cotyledons (Woodworth"; "Tracy") 3 - Light Purple below cotyledons ("Becson"; "Pickett 71") 4 - Dark Purple extending to unifoliate leaves ("Hodgson"; "Coker Hampton 266A") | COTYLEDON COLOR: (Mature Seed) | <u> </u> | | |
| 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SP1 ²]: 2 - Type B (SP1 ^b] HYPOCOTYL COLOR: 2 1 - Green only ("Evans"; 'Davis") 2 - Green with bronze band below cotyledons (Woodworth"; 'Tracy") 3 - Light Purple below cotyledons ("Beeson"; 'Pickett 71") 4 - Dark Purple extending to unifoliate leaves ("Hodgson"; 'Coker Hampton 266A") | 11 | | | |
| 1 - Low 2 - High SEED PROTEIN ELECTROPHORETIC BAND: 1 - Type A (SP1*) 2 - Type B (SP1*) 4 - Type A (SP1*) 2 - Type B (SP1*) 2 - Type B (SP1*) 2 - Type B (SP1*) 3 - Green only ("Evans"; "Davis") 2 - Green with bronze band below cotyledons ("Woodworth"; "Tracy") 3 - Light Purple below cotyledons ("Beeson"; "Pickett 71") 4 - Dark Purple extending to unifoliate leaves ("Hodgson"; "Coker Hampton 266A") | SEED PROTEIN PEROVIDASE ACTIVITY. | | | <u> </u> |
| 1 = Type A (SP1 ⁸] 2 = Type B (SP1 ^b] (YPOCOTYL COLOR: 2 1 = Green only ("Evans"; "Davis") 2 = Green with bronze band below cotyledons ("Woodworth"; "Tracy") 3 = Light Purple below cotyledons ("Beeson"; "Pickett 71") 4 = Dark Purple extending to unifoliate leaves ("Hodgson"; "Coker Hampton 266A") | | | | |
| 1 = Type A (SP1 ⁸] 2 = Type B (SP1 ^b] (YPOCOTYL COLOR: 2 1 = Green only ("Evans"; "Davis") 2 = Green with bronze band below cotyledons ("Woodworth"; "Tracy") 3 = Light Purple below cotyledons ("Beeson"; "Pickett 71") 4 = Dark Purple extending to unifoliate leaves ("Hodgson"; "Coker Hampton 266A") | | | · | |
| 1 = Green only ("Evans"; "Davis") 2 = Green with bronze band below cotyledons (Woodworth"; "Tracy") 3 = Light Purple below cotyledons ("Beeson"; "Pickett 71") 4 = Dark Purple extending to unifoliate leaves ("Hodgson"; "Coker Hampton 266A") | SECUL MUTEIN ELECTROPHORETIC BAND: | | | - |
| 2 = Green with bronze band below cotyledons ("Woodworth"; "Tracy") 3 = Light Purple below cotyledons ("Beeson"; Pickett 71") 4 = Dark Purple extending to unifoliate leaves ("Hodgson"; "Coker Hampton 266A") | 1 - Type A (SP1*) 2 - Type B (SP1*) | 4 | | |
| 3 = Light Purple below cotyledons ('Beeson'; Pickett 71') 4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A') | TYPOCOTYL COLOR: | | | |
| | 3 = Light Purple below cotyledons ('Beeson'; Pickets 7 | 11 | dons ('Woodworth': 'Tracy') | |
| | | | , | |
| 7) i | <u></u> | | | |

0

0

*

Powdery Mildew (Microsphaera diffusa)

Brown Stem Rot (Cephalosporium gregatum)

Stem Canker (Diaposthe phaseolorum vas caulivora)

| ta. OUSEASE RE | ACTION: -(Enter 0 - Not Tested: 1-Susceptible: 2 | -Resistant (Continued) | The Second State of the Second |
|------------------|---|---|--|
| FUNGAL D | DISEASES: (Continued) | | |
| * 0 Pod | and Stem Blight (Diaporthe phaseolorum var; sojec) | | and the second of the second o |
| O Pum | le Seed Stain (Oercospora kikuchii) | | 9800163 |
| 0 Rhiz | octonia Root Rot (Rhizoctonia salani) | | |
| Phyto | ophthora Rot (Phytophthora megasperma vac. sojae) | · · · · · · · · · · · · · · · · · · · | |
| * 1 Race | 1 Race 2 Race 3 | Race 4 Race 9 | Flace 6 , Race 7 |
| Race | 8 Race 9 Other (Specify) | | en e |
| VIRAL DIS | EASES: | an an al-said and an | |
| Bud I | Blight (Tobscco Ringspot Virus) | Karamatan Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn | na filozofia (h. 1865). 18 - Januari - Alexandria Alexandria (h. 1866). 18 - Alexandria Alexandria (h. 1866). |
| Yello | w Mossic (Besn Yellow Mossic Virus) | ederle e egik kirjanean. Teoria | |
| * Comp | rea Mossic (Cowpea Chlorotic Virus) | | |
| 2 Pod N | Aottle (Bean Fod Mottle Virus) | - 1.00 mg = 1.0 | |
| * 2 Seed | Mottle (Soybean Mozaic Virus) | | |
| NEMATODE | E DISEASES: | | |
| Soybe | ean Cyst Nematode (Heterodera glycines) | | |
| * Race | 1 Rscc 2 2 Rscc 3 | Race 4 1 Other 1 | Specify race 14 BT: 12/4/02) |
| O Lance | Nematode (Hopicialmus Colombus) | • | Columna |
| * 1 South | em Root Knot Nematode (Meloklogyne Incognital) | | |
| ★ 0 North | em Root Knot Nematode (Meloidogyne Hapla) | | |
| 1 Peanu | t Root Knot Nematode (Meloidogyne arenaria) | | |
| 0 Renife | orm Nematode (Rotylenchulus reniformis) | | |
| ОТНЕ | R DISEASE NOT ON FORM (Specify): | | |
| 20: PHYSIOI OGIO | CAL RESPONSES: (Enter 0 - Not Tested; 1 - Susce | ntile 2 = Onitial | |
| + [0] | Alorosis on Calcareous Soit | ptow, 2 - nearmy | |
| | (Specify) | | |
| | TION: (Enter 0 = Not Texted; 1 = Susceptible; 2 = F | | |
| | an Bean Boetle (Epilachna varivestic) | idaoni, | |
| <u></u> | Lest Hopper (Emposses fabre) | | • |
| \equiv | (Specify) | - | · · · · · · · · · · · · · · · · · · · |
| | ICH VARIETY MOST CLOSELY RESEMBLES THA | AT SUBMITTED. | |
| CHARACTER | | CHARACTER | NAME OF VARIETY |
| Plant Shape | DP 3589 | Seed Coat Luster | DP 3589 |
| Leaf Shape | DP 3589 | Sced Size | DP 3589 |
| Leaf Cotor | DP 3589 | Seed Shape | DP 3589 |
| Leaf_Size | DP 3589 | Seedling Pigmentation | P9592 |
| | | | . The state of the control of the state of t |

21 GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

| VARIETY | | PLANT " LODGING | CM PŁANT | LEAFLET SIZE | | SEED CONTENT | | SEED SIZE G/100 | , NO. |
|---------------------------------------|----------|--------------------|-------------|--------------|---|--------------|-------|--------------------|----------|
| _ | MATURITY | | HEIGILL | CM Midel | CM Length | X Fratein | K Oil | seeds | \$EE0\$/ |
| DPX 8S59 | 134 | 1.8 | 80 | | | 37.3 | 16.7 | 17 | |
| DP 3588 Name of Similar Variety | 133 | 1.9 | 76 | e e | 7, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12 | 38.1 | 17.0 | 15 | |

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

- 1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
- 2. Buttery, B.R. and R.L. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
- 3: Hymorite, T. 1973. Electrophoretic analysis of SBTI-A2 in the USOA soybean germplasm collection. Crop Sci., 13: 420-421.
- 4. Payne, R.C. and L.F. Morrie. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

22.6V 91 6W 13.

Odalet i delek

EXHIBIT D

DBALTechnology Holding Corps

9800163

ADDITIONAL DESCRIPTION OF VARIETY

`DP 5989' (gr: 12/4/02) \checkmark DPX 8S59 is an F_4 selection composited in the F_5 generation from the cross FFR 561 x DP 3589. It is a late group V with tall plants that are adapted to tough soils and early or late planting. It is resistant to stem canker, frogeye leaf spot and soybean mosaic virus.

DPX 8S59 is resistant to race 3 and tolerant to race 14 of soybean cyst nematode. It has white flowers, tawny pubescence and tan pods at maturity. Seeds average 2700 per pound and are shiny yellow with black hila.

| poplication is required in order to determine the certificate is to be issued (7 U.S.C. 24 portion of the certificate is issued on the certificate is issued or certificate in the certificate is issued or certificate in certificate | 21). The information is held ad (7 U.S.C. 2426). 3. VARIETY NAME DP 5989 6. FAX (Include area code) 662.742.3182 |
|--|---|
| TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER 93-14731 DPX 8S59 TELEPHONE (Include area ade) 662.742.4141 PVPO NUMBER 0 0 9 8 (propriate block. If no, please explain | 3. VARIETY NAME DP 5989 6. FAX (Include area code) 662.742.3182 0 1 6 3 n. YES NO |
| OR EXPERIMENTAL NUMBER 93-14731 DPX 8S59 TELEPHONE (Include area ade) 662.742.4141 PVPO NUMBER 0 0 9 8 (Option of the propriate block. If no, please explain | DP 5989 6. FAX (Include area code) 662.742.3182 0 1 6 3 n. YES NO |
| TELEPHONE (Include area ide) 662.742.4141 PVPO NUMBER 0 0 9 8 (include area | 662.742.3182 0 0 1 6 3 n. YES NO |
| 662.742.4141 PVPO NUMBER 0 0 9 8 (propriate block. If no, please explain | 662.742.3182 0 0 1 6 3 n. YES NO |
| PVPO NUMBER 0 0 9 8 (propriate block. If no, please explain | 0 0 1 6 3 n. XYES NO |
| 0098 | n. YES NO |
| oropriate block. If no, please explai i | n. YES NO |
| | |
| l company? If no, give name of co | untry. X YES NO |
| company? If no, give name of co | untry. X YES NO |
| company? If no, give name of co | untry. X YES NO |
| , | , M L |
| | |
| NO If no, please answer one of | of the following: |
| ., | _ |
| the original owner(s) a U.S. Nationa | I(s)? |
| NO If no, give name of country | 1 |
| | |
| | |
| , , , , , , , , , , , , , , , , , , , | |
| Atra enaco). | |
| au a space). | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| who meet the following criteria: | |
| n must be a U.S. national, national o U.S. for the same genus and specie | f a UPOV member country, or es. |
| ne original breeder(s), the company rry which affords similar protection to | must be U.S. based, owned by nationals of the U.S. for the same |
| nal owner and the applicant must me | eet one of the above criteria. |
| d the final breeding. See Section 41 | I (a)(2) ot the Plant Variety Protection |
| (in the state of t | the original owner(s) a U.S. National NO If no, give name of country are) the original owner(s) a U.S. bas NO If no, give name of country extra space): b) who meet the following criteria: on must be a U.S. national, national of U.S. for the same genus and species the original breeder(s), the company which affords similar protection to the country which affords similar protection to the same genus and species the original breeder(s), the company which affords similar protection to the same genus and species the original breeder(s), the company which affords similar protection to the same genus and species the original breeder(s), the company which affords similar protection to the same genus and species the original owner and the applicant must me |

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provide and employer.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

EXHIBIT E

DSPLTechnology Holdinglon's -DELTAPINE SEED'S APPLICAT

9800163

STATEMENT OF APPLICANT'S OWNERSHIP

'DP 5989'(67:12/4/02)

-DPX 8S59'was originated and developed by Grover Shannon, Ph.D., soybean breeder, Delta and Pine Land Company, dba Deltapine Seed. By agreement between employee and Delta and Pine Land Company, all rights to any invention or discovery are assigned to the Company. No rights to any invention or discovery are retained by the employee.